



#16

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UF-267XC1

SEQUENCE LISTING

<110> Yamamoto, Janet K.
Janelle, Jennifer White
Torres, Barbara A.
Arai, Maki
Tanabe, Taishi
Pu, Ruiyu

<120> Materials and Methods for Detecting, Preventing, and Treating
Retroviral Infection

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<140> US 10/080,772
<141> 2002-02-22

<150> US 60/270,745
<151> 2001-02-22

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<210> 12
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 <212> DNA
 <213> Feline immunodeficiency virus

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gatatggcaa	ttaccactt	aaaagtttt	gcagtagctg	gaattttaaa	tatgactgtg	300
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<210> 13

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 13

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aagatggggc	cagctgcagc	cccggtaaac	caagtgcagc	aatggtgcc	atctgcac	1320
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<210> 14

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 14

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gccac	ctt	ggc	ttt	ttatgg	ttatgg	1260
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aagatgg	gg	gg	ttt	ttatgg	ttatgg	1353
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<210> 15

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 15

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gcaagag	agg	ggcttagg	gg	tgaggagg	tgtccatctt	540
ttaact	caa	ctgat	atggc	caactgtgg	tcacagc	600
gagatct	tag	atgaa	aaact	ctgatgtat	ttctgctgc	660
gatgggc	c	ctt	ttt	gatgtat	tcatc	720
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aagcaagg	ag	ggc	ttt	ttatgg	ttatgg	900
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aagatgg	gg	gg	ttt	ttatgg	ttatgg	1353
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acagg	aa	gg	ttt	ttatgg	ttatgg	
taa						

<210> 16

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 16

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gatatggca	ttaccactt	aaaagttttt	gcagtagctg	gaattttaaa	tatgactgtg	300
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<210> 17

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 17

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<212> DNA
<213> Feline immunodeficiency virus
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<212> DNA
<213> Feline immunodeficiency virus
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<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 20

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<212> DNA

<213> Feline immunodeficiency virus

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gatatggcaa	ttaccacttt	aaaagttttt	gcagtagctg	gaattttaaa	tatgactgtg	300
tctactgccc	cagcagctga	acacatgtat	gctcagatgg	gattagatac	cagaccatct	360
ataaaagaag	gtgggggaaa	agaagaagga	cctccacagg	cttattcctat	tcaaacagta	420
aatggagcac	cacagtatgt	agcccttgac	ccaaaaatgg	tgtccatctt	tatggaaaaaa	480
gcaagagagg	ggctaggagg	tgaggaggc	caactgtggt	tcacagcctt	ttctgctaat	540
ttaacttcaa	ctgatatggc	tacattaatt	atgtctgcgc	ctggctgtgc	agcagataaa	600
gagatcttag	atgaaacact	gaaacagatg	acagctgagt	atgatcgtag	tcatcctcct	660

gatgggccta	gaccgctgcc	ctat	tcacc	gctgcggaga	ttat	ggaaat	aggattaact	720
caagaacaac	aagcgagcc	cagat	ttgc	ccagctagaa	tgc	agtgtag	agcatggtat	780
cttgaagcac	taggaa	agg	tt	gcagccata	aa	agctaaat	ctccccgagc	840
aagcaaggag	ctaa	aggag	ttat	cctca	ttt	acagata	gattattgc	900
caagagcaga	acac	agctga	ag	taa	aa	acttacat	catagccat	960
gctaacc	ca	ccag	tt	aaa	aa	atgttgc	tcaaata	1020
attgt	aaa	gg	caat	tgagt	cat	tttacagata	cagagat	1080
aaactgag	cct	gtc	aa	aga	ttt	ggatca	tttagaggaa	1140
gctcttacaa	ggg	tcc	agac	at	caaa	aca	gatctg	1200
aaaaaaccag	gcc	actt	ggc	caaa	aca	atgt	caactgtg	1260
aaac	cct	gg	tc	actt	agct	tg	tttgc	1320
aagatgggc	cag	ctgc	cag	cc	cgtaa	ac	caagtgc	aaatgg
ccaa	tgga	ac	aggaa	att	tttagatt	taa	atctgcac	1353

<210> 22

<211> 450

<212> PRT

<213> Feline immunodeficiency virus

<400> 22

Met	Gly	Asn	Gly	Gln	Gly	Arg	Asp	Trp	Lys	Thr	Ala	Val	Lys	Arg	Cys
1				5					10				15		

Ser	Asn	Val	Ala	Val	Gly	Val	Gly	Ser	Lys	Ser	Arg	Lys	Phe	Gly	Glu
				20				25				30			

Gly	Asn	Phe	Arg	Trp	Ala	Ile	Arg	Met	Ala	Asn	Val	Thr	Thr	Gly	Arg
		35				40					45				

Glu	Pro	Gly	Asp	Ile	Pro	Glu	Asn	Leu	Glu	Gln	Leu	Arg	Ser	Ile	Ile
	50				55				60						

Cys	Asp	Leu	His	Asp	Arg	Arg	Glu	Gln	Tyr	Gly	Ser	Ser	Lys	Glu	Ile
65				70			75			80					

Asp	Met	Ala	Ile	Thr	Thr	Leu	Lys	Val	Phe	Ala	Val	Ala	Gly	Ile	Leu
				85				90				95			

Asn	Met	Thr	Val	Ser	Thr	Ala	Ala	Ala	Glu	His	Met	Tyr	Ala	Gln
			100			105				110				

Met	Gly	Leu	Asp	Thr	Arg	Pro	Ser	Ile	Lys	Glu	Ser	Gly	Gly	Lys	Glu
	115				120				125						

Glu	Gly	Pro	Pro	Gln	Ala	Tyr	Pro	Ile	Gln	Thr	Val	Asn	Gly	Ala	Pro
	130				135				140						

Gln	Tyr	Val	Ala	Leu	Asp	Pro	Lys	Met	Val	Ser	Ile	Phe	Met	Glu	Lys
145				150				155			160				

Ala	Arg	Glu	Gly	Leu	Gly	Glu	Glu	Val	Gln	Leu	Trp	Phe	Thr	Ala
				165				170			175			

Phe	Ser	Ala	Asn	Leu	Thr	Ser	Thr	Asp	Met	Ala	Thr	Leu	Ile	Met	Ser
	180				185				185			190			

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 23
 <211> 450
 <212> PRT

<213> Feline immunodeficiency virus

<400> 23

Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Ala Ala Val Lys Arg Cys
1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
50 55 60

Cys Asp Leu His Asn Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
195 200 205

Gln Ile Thr Ala Asp Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Arg Leu Ala Ala Ile Lys Ala
260 265 270

Lys Pro Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Pro
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 24
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 24
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Ala Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Leu Ile Ile
 50 55 60

Cys Asp Leu His Asp Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Ile Thr Ala Asp Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Arg Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Pro Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
435 440 445

Asp Leu
450

<210> 25

<211> 449

<212> PRT

<213> Feline immunodeficiency virus

<400> 25

Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
50 55 60

Cys Asp Leu His Asn Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160
 Ala Arg Glu Gly Leu Gly Gly Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175
 Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190
 Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205
 Gln Ile Thr Ala Asp Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220
 Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240
 Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255
 Arg Ala Trp Tyr Leu Glu Ala Leu Gly Arg Leu Ala Ala Ile Lys Ala
 260 265 270
 Lys Pro Pro Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr Ser
 275 280 285
 Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn Thr
 290 295 300
 Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn Ala
 305 310 315 320
 Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser Thr
 325 330 335
 Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly Tyr
 340 345 350
 Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val Gln
 355 360 365
 Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly His
 370 375 380
 Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly Lys
 385 390 395 400
 Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr Pro
 405 410 415
 Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val Gln
 420 425 430

Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu Asp
 435 440 445

Leu

<210> 26
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 26
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Ile Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Glu Ser Lys Ser Arg Lys Phe Glu Lys
 20 25 30

Glu Asn Phe Arg Trp Ala Ile Lys Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Asp Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 27
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 27
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Asp Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Val Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Gly Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 28
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 28
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Asp Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asn Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Ser Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 29
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 29
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Asp Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Met Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 30
 <211> 450
 <212> PRT

<213> Feline immunodeficiency virus

<400> 30

Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
50 55 60

Cys Asp Leu His Asp Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Ala Glu His Met Tyr Ala Gln
100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
145 150 155 160

Ala Arg Glu Gly Leu Gly Gly Glu Val Gln Leu Trp Phe Thr Ala
165 170 175

Phe Ser Thr Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 31
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 31
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Asp Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Ser Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365
 Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380
 His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400
 Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415
 Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430
 Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445
 Asp Leu
 450
 <210> 32
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus
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 Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30
 Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45
 Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60
 Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80
 Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95
 Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110
 Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
 115 120 125
 Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160
 Ala Arg Glu Gly Leu Gly Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175
 Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190
 Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205
 Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220
 Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240
 Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255
 Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270
 Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285
 Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300
 Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320
 Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335
 Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350
 Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365
 Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380
 His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400
 Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415
 Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 33
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 33
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Val Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Gly Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240
 Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255
 Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270
 Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285
 Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300
 Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320
 Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335
 Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350
 Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365
 Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380
 His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400
 Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415
 Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430
 Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445
 Asp Leu
 450
 <210> 34
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus
 <400> 34
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Gly Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 35
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 35
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Ala Glu His Met Tyr Ala Gln
100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
145 150 155 160

Ala Arg Glu Gly Leu Gly Gly Glu Val Gln Leu Trp Phe Thr Ala
165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Gly Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 36
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus

<400> 36
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190
 Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205
 Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220
 Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240
 Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Arg Cys
 245 250 255
 Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270
 Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285
 Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300
 Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320
 Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335
 Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350
 Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365
 Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380
 His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400
 Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415
 Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Pro Val Asn Gln Val
 420 425 430
 Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445
 Asp Leu
 450

<210> 37
<211> 450
<212> PRT
<213> Feline immunodeficiency virus

<400> 37
Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Val Gln Leu Trp Phe Thr Ala
165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270
 Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285
 Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300
 Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320
 Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335
 Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350
 Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365
 Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380
 His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400
 Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415
 Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430
 Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445
 Asp Leu
 450
 <210> 38
 <211> 450
 <212> PRT
 <213> Feline immunodeficiency virus
 <400> 38
 Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
 1 5 10 15
 Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
 20 25 30
 Gly Asp Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
 35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
 50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
 65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
 85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Ala Glu His Met Tyr Ala Gln
 100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
 115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Pro Val Asn Gln Val
420 425 430

Gln Gln Met Ala Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
435 440 445

Asp Leu
450

<210> 39
<211> 450
<212> PRT
<213> Feline immunodeficiency virus

<400> 39
Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
20 25 30

Gly Asp Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
 130 135 140
 Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
 145 150 155 160
 Ala Arg Glu Gly Leu Gly Gly Glu Val Gln Leu Trp Phe Thr Ala
 165 170 175
 Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
 180 185 190
 Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
 195 200 205
 Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220
 Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240
 Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255
 Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270
 Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285
 Ser Ser Phe Ile Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300
 Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320
 Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335
 Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350
 Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365
 Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380
 His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400
 Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
420 425 430

Gln Gln Met Ala Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
435 440 445

Asp Leu
450

<210> 40
<211> 450
<212> PRT
<213> Feline immunodeficiency virus

<400> 40
Met Gly Asn Gly Gln Gly Arg Asp Trp Lys Thr Ala Val Lys Arg Cys
1 5 10 15

Ser Asn Val Ala Val Gly Val Gly Ser Lys Ser Arg Lys Phe Gly Glu
20 25 30

Gly Asn Phe Arg Trp Ala Ile Arg Met Ala Asn Val Thr Thr Gly Arg
35 40 45

Glu Pro Gly Asp Ile Pro Glu Asn Leu Glu Gln Leu Arg Ser Ile Ile
50 55 60

Cys Asp Leu His Gly Arg Arg Glu Gln Tyr Gly Ser Ser Lys Glu Ile
65 70 75 80

Asp Met Ala Ile Thr Thr Leu Lys Val Phe Ala Val Ala Gly Ile Leu
85 90 95

Asn Met Thr Val Ser Thr Ala Ala Ala Glu His Met Tyr Ala Gln
100 105 110

Met Gly Leu Asp Thr Arg Pro Ser Ile Lys Glu Gly Gly Lys Glu
115 120 125

Glu Gly Pro Pro Gln Ala Tyr Pro Ile Gln Thr Val Asn Gly Ala Pro
130 135 140

Gln Tyr Val Ala Leu Asp Pro Lys Met Val Ser Ile Phe Met Glu Lys
145 150 155 160

Ala Arg Glu Gly Leu Gly Glu Glu Val Gln Leu Trp Phe Thr Ala
165 170 175

Phe Ser Ala Asn Leu Thr Ser Thr Asp Met Ala Thr Leu Ile Met Ser
180 185 190

Ala Pro Gly Cys Ala Ala Asp Lys Glu Ile Leu Asp Glu Thr Leu Lys
195 200 205

Gln Met Thr Ala Glu Tyr Asp Arg Thr His Pro Pro Asp Gly Pro Arg
 210 215 220

Pro Leu Pro Tyr Phe Thr Ala Ala Glu Ile Met Gly Ile Gly Leu Thr
 225 230 235 240

Gln Glu Gln Gln Ala Glu Pro Arg Phe Ala Pro Ala Arg Met Gln Cys
 245 250 255

Arg Ala Trp Tyr Leu Glu Ala Leu Gly Lys Leu Ala Ala Ile Lys Ala
 260 265 270

Lys Ser Pro Arg Ala Val Gln Leu Lys Gln Gly Ala Lys Glu Asp Tyr
 275 280 285

Ser Ser Phe Thr Asp Arg Leu Phe Ala Gln Ile Asp Gln Glu Gln Asn
 290 295 300

Thr Ala Glu Val Lys Leu Tyr Leu Lys Gln Ser Leu Ser Ile Ala Asn
 305 310 315 320

Ala Asn Pro Asp Cys Lys Arg Ala Met Ser His Leu Lys Pro Glu Ser
 325 330 335

Thr Leu Glu Glu Lys Leu Arg Ala Cys Gln Glu Val Gly Ser Pro Gly
 340 345 350

Tyr Lys Met Gln Leu Leu Ala Glu Ala Leu Thr Arg Val Gln Thr Val
 355 360 365

Gln Thr Arg Gly Ser Arg Pro Thr Cys Phe Asn Cys Lys Lys Pro Gly
 370 375 380

His Leu Ala Lys Gln Cys Arg Glu Ala Lys Arg Cys Asn Asn Cys Gly
 385 390 395 400

Lys Pro Gly His Leu Ala Ala Asn Cys Trp Gln Arg Gly Lys Lys Thr
 405 410 415

Pro Gly Asn Gly Lys Met Gly Pro Ala Ala Ala Pro Val Asn Gln Val
 420 425 430

Gln Gln Met Val Pro Ser Ala Pro Pro Met Glu Asp Arg Lys Leu Leu
 435 440 445

Asp Leu
 450

<210> 41
 <211> 1353
 <212> DNA
 <213> Feline immunodeficiency virus

<400> 41
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atggcta	atg	taactacagg	acgagaac	ctt	ggatatac	180
agatcgat	ta	ttt	gtgattt	acatggcaga	agaacaat	240
gatatggc	aa	ttt	accactt	aaa	agttttt	300
tctactg	ccg	cagcag	ctgaa	acatgtat	gctcagatgg	360
ataaaaga	ag	gtgggg	aaa	agaagaagga	cctccacagg	420
aatgggac	cac	acatgt	tgcc	ccatgt	ttt	480
gcaagag	gg	ggtaggagg	tgaggagg	caactgt	ttctgct	540
ttaactt	ca	ctgat	atggc	tacatta	atgtctgc	600
gagatctt	ag	atgaa	aaact	gaaacagatg	acagctg	660
gatgggc	c	ttt	accat	ttt	atgtcgt	720
caagaaca	ac	aag	cg	ccatgt	tcatcct	780
cttgaag	cac	taggaa	ggc	ccatata	ttt	840
aagcaagg	g	ctaa	ttt	ttt	ttt	900
caagagc	aga	ag	ttt	ttt	ttt	960
gctaacc	cag	ttt	ttt	ttt	ttt	1020
aaactg	gag	ttt	ttt	ttt	ttt	1080
gctctt	aca	gggtt	ttt	ttt	ttt	1140
aaaaacc	cc	ttt	ttt	ttt	ttt	1200
gccac	ctt	ttt	ttt	ttt	ttt	1260
aaac	ttt	ttt	ttt	ttt	ttt	1320
aagatgg	ggc	ttt	ttt	ttt	ttt	1353
ccaatgg	aa	ttt	ttt	ttt	ttt	
acagggaa	attt	ttt	ttt	ttt	ttt	
ttt	ttt	ttt	ttt	ttt	ttt	

<210> 42

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 42

atggggat	gac	aggggc	agact	ggaa	acggccgtt	agagatgt	taatgttgc	60
gtagggtag	gg	agtaag	ag	tagaa	ggaa	acttt	ggatgt	120
atggcta	at	taact	acagg	acg	gagaac	ctt	ggatatac	180
agatcgat	ttt	gtgattt	acat	gac	caga	aa	agatct	240
gatatggc	aa	ttt	accactt	aaa	agttttt	gc	agtagct	300
tctactg	ccg	cagcag	ctgaa	acatgtat	gctcagatgg	gat	tagat	360
ataaaaga	ag	gtgggg	aaa	agaagaagga	cctccacagg	ttt	atgtcgt	420
aatgggac	cac	acatgt	tgcc	ccatgt	ttt	ttt	ttt	480
gcaagag	gg	ggtaggagg	tgaggagg	caactgt	ttctgct	ttt	ttt	540
ttaactt	ca	ctgat	atggc	tacatta	atgtctgc	ttt	ttt	600
gagatctt	ag	atgaa	aaact	gaaacagatg	acagctg	atgtcgt	tcatcct	660
gatgggc	c	ttt	accat	ttt	ttt	ttt	ttt	720
caagaaca	ac	aag	cg	ccatgt	ttt	ttt	ttt	780
cttgaag	cac	taggaa	ggc	ccatata	ttt	ttt	ttt	840
aagcaagg	g	ctaa	ttt	ttt	ttt	ttt	ttt	900
caagagc	aga	ag	ttt	ttt	ttt	ttt	ttt	960
gctaacc	cag	ttt	ttt	ttt	ttt	ttt	ttt	1020
aaactg	gag	ttt	ttt	ttt	ttt	ttt	ttt	1080
gctctt	aca	gggtt	ttt	ttt	ttt	ttt	ttt	1140
aaaaacc	cc	ttt	ttt	ttt	ttt	ttt	ttt	1200
gccac	ctt	ttt	ttt	ttt	ttt	ttt	ttt	1260
aaac	ttt	ttt	ttt	ttt	ttt	ttt	ttt	1320
aagatgg	ggc	ttt	ttt	ttt	ttt	ttt	ttt	1353
ccaatgg	aa	ttt	ttt	ttt	ttt	ttt	ttt	
acagggaa	attt	ttt	ttt	ttt	ttt	ttt	ttt	
ttt	ttt	ttt	ttt	ttt	ttt	ttt	ttt	

<210> 43

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 43

atggggaatg	gacaggggcg	agattggaaa	atggccatta	agagatgtag	taatgttgct	60
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atggctaatg	tatctacagg	acgagaacct	ggtgatatac	cagagactt	agatcaacta	180
agttggta	tttgcgattt	acaagaaaga	agagaaaaat	ttggatctag	caaagaaatt	240
gatatggcaa	ttgtgacatt	aaaagtctt	gcggtagcag	gactttaaa	tatgacggtg	300
tctactgctg	ctgcagctga	aaatatgtat	tctcaaatgg	gattagacac	tagccatct	360
atgaaagaag	caggtggaaa	agaggaaggc	cctccacagg	catatccat	tcaaacagta	420
aatggagtac	cacaatatgt	agcacttgac	ccaaaaatgg	tgtccattt	tatggaaaag	480
gcaagagaag	gactaggagg	tgaggaagtt	caactatgg	ttactgcctt	ctctgcaaat	540
ttaacaccta	ctgacatggc	cacattaata	atggccgcac	cagggtgcgc	tgcagataaa	600
gaaatattgg	atgaaagctt	aaagcaactg	acagcagaat	atgatgcac	acatccccct	660
gatgctccca	gaccattacc	ctatttact	gcagcagaaa	ttatgggtat	aggattaact	720
caagaacaac	aagcagaagc	aagatttgca	ccagctagga	tgcagtgtag	agcatggat	780
ctcgaggcat	tagaaaattt	ggctgccata	aaagctaagt	ctcctcgagc	tgtcagttt	840
agacaaggag	ctaaggaaaga	ttattcatcc	tttatagaca	gattgttgc	ccaaatagat	900
caagaacaaa	atacagctga	agttaaagttt	tattnaaaac	agtcattttag	catacgtaat	960
gctaatgcag	actgtaaaaaa	ggcaatgagc	cacccatagc	cagaaagttc	cctagaagaa	1020
aagttgagag	cttgcataaga	aataggctca	ccaggtata	aaatgcact	cttggcagaa	1080
gctcttacaa	aagttcaagt	agtgcataatc	aaaggatctg	gaccagtgtg	ttttaattgt	1140
aaaaaaccag	gacatcttagc	aagacaatgt	agagaagtga	aaaaatgtaa	taaatgtgga	1200
aaacctggtc	atgttagctgc	caattgttgg	caagggaaata	gaaagaattc	gggaaacttgg	1260
aaggcggggc	gagctgcagc	cccagtgaat	caaatgcagc	aagcagtaat	gccccatctgca	1320
cctccaatgg	aggagaaact	attggattta	taa			1353

<210> 44

<211> 1353

<212> DNA

<213> Feline immunodeficiency virus

<400> 44

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atggctaatg	tatctacagg	acgagaacct	ggtgatatac	cagagactt	agatcaactg	180
agttggta	tttgcgattt	acaagaaaga	agagaaaaat	ttggatctag	caaagaaatt	240
gatatggcaa	ttaccacctt	aaaagtttt	gcagtagtgg	gactttaaa	tatgacagtg	300
tctactgctg	ctgcagctga	aaatatgtat	actcagatgg	gattagacac	tagaccatct	360
acaaaggaag	ctggaggaaa	agaggaaggc	cctccacagg	catatccat	tcaaacagta	420
aatggagcac	cacaatatgt	agctcttgcac	ccaaaaatgg	tgtctat	tttcatggaaaag	480
gcaagagaag	ggttaggagg	tgaagaagtt	caactatgg	tcacagcctt	ctctgcaaat	540
ttaacaccta	ctgacatggc	cacattaata	atggccgcac	cagggtgcgc	tgcagataaa	600
gaaatattgg	atgaaagctt	aaagcaaata	acagcagaat	atgatcgac	acatccccct	660
gatggctcta	gaccattacc	atatttact	gcggcagaga	ttatgggtat	aggattaact	720
caagaacaac	aagcagaagc	aagatttgca	ccagctagga	tgcagtgtag	agcatggat	780
cttgaggcat	tagaaaattt	ggccgcccata	aaagctaagt	ctcctcgagc	tgtacagtta	840
agacaaggag	ctaaagaaga	ttattcatcc	tttatagaca	gattgttgc	ccaaatagat	900
caagaacaaa	atacagctga	agttaaagata	tatctaaaac	agtcattttag	catggctaat	960
gctaatgcag	aatgcaaaaaa	ggcaatgagt	catcttaagc	cagaaaggtc	cctagaagaa	1020
aagttgagag	cctgtcaaga	gataggatcc	ccaggtata	aaatgcact	cttggcagaa	1080
gctcttacaa	aagttcaagt	agtgcataatc	aaaggatctg	gaccagtgtg	ttttaattgt	1140
aaaaaaccgg	ggcatcttagc	aagacagtgt	agagatgtga	aaaaatgtaa	taaatgtgga	1200
agacctggtc	attagctgc	cagatgttgg	cagggtggta	aaaagaactc	gggaaacttgg	1260

aaggcggggc gagctgcagc cccagtaaac caagtgcagc aggcatgtca 1320
cctccaatgg aggagagact attggattta taa 1353

<210> 45
<211> 1200
<212> DNA
<213> Feli

<400> 45

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gtaggagtag	gggggaagag	taaaaaattt	ggagagggga	attttaggtg	ggccataaga	120
atggctaattg	tatctacagg	acgagaacct	ggtgatatac	cagagactt	agatcaatta	180
aggttggta	tttgcgattt	acaagaaaga	agagaaaaat	ttggatctag	caaagaaatt	240
gacatggcaa	ttacaacatt	aaaagtctt	gcagtagtgg	gactttaaa	tatgacagtg	300
tctactgctg	ctgcagctga	aaatatgtat	actcagatgg	gattagacac	tagaccgtct	360
acaaaagaag	cgggaggaaa	agaggaaggc	cctccacagg	catatcctat	tcaaacagta	420
aatggagcac	cacaatatgt	agcacttgc	ccaaaaatgg	tgtccatttt	tatggaaaag	480
gcaagagagg	gattaggagg	tgaggaagtt	caactatgg	ttacagcctt	ctctgcaaat	540
ttaacaccta	ctgacatggc	cacattaata	atggccgcac	ccgggtgcgc	tgcagataaa	600
gaaatattgg	atgaaagctt	aaagcaattt	acagcagaat	atgatcggac	aatccccct	660
gatggtccta	gaccattacc	ctatttact	gcagcagaaa	ttatgggtat	aggattaact	720
caagaacaac	aagcagaagc	aagatttgc	ccagcttaga	tgcaatgtag	agcatggat	780
cttgaggcat	tagaaaatt	agcccccata	aaggcttaat	ctcctcgagc	tgtcagat	840
agacaaggag	ctaaaggaga	ttatttcatcc	tttatagaca	gattgttgc	ccaaatagat	900
caagaacaaa	atacagctga	agttaagtta	tatctaaaac	agtcatatag	catagctaat	960
gctaatgcag	aatgcaaaaa	ggcaatgagt	catcttaagc	cagaaagtac	cctagaagaa	1020
aagttgagag	cttgtcaaga	gataggatcc	ccaggatata	aaatgcaact	cttggcagaa	1080
gctttacaa	aagttcaagt	agtgcataca	aaaggatcag	gaccagtgt	ttttatgtt	1140
aaaaaaccqa	qqcatctaqc	aaqacactgt	aaqatqtqa	aaaaatgtaa	taaatqtqqa	1200

<210> 46
<211> 795
<212> DNA
<213> Fel

<400> 46

tctacattaa	aagtcttgc	agtagcagga	atttaaata	tgacagtgtc	tactgctgc	60
gcagctgaaa	acatgtataa	tcaaatggga	ttagacacta	gaccgtctac	aagagaagca	120
ggaggaaaaag	aggaaggccc	tccacaggca	tatcctattc	aaacagtaaa	tggagcacct	180
caatatgttag	cacttgaccc	aaaaatggtg	tccatttta	tggaaaaagc	aagagaagga	240
ttaggaggtg	aggaagttca	actatggttt	actgccttct	ctgcaaattt	aacacctact	300
gacatggcca	cattaataat	ggccgcacca	gggtgtgctg	cagataaaaga	aatatttagat	360
gaaagcttaa	agcaattgac	agcagaatat	gatcgac	atccccctga	tgctccataga	420
ccattaccct	atttactgc	agcagaaaatt	atgggtatag	gattaactca	agaacaacaa	480
gcagaagcaa	gatttgcacc	agctaggatg	cagtgttagag	catgttatct	tgagggcatta	540
ggaaaattgg	ccgccataaa	agctaagtct	cctcgagctg	tgcaagttaa	acatggagct	600
aaggaggatt	attcatccctt	tatagacaga	ttgtttgcc	aaatagatca	agaacaaaat	660
acagctgaag	ttaaattata	tttaaaacag	tcattaagca	tagctaattgc	taatgcagaa	720
tgtaaaaaaag	caatgagtca	ccttaagcca	gaaagtaccc	tagaagaaaa	gttgagagct	780
tgtcaagaq	taqqa					795

<210> 47
<211> 1353
<212> DNA

<213> Feline immunodeficiency virus

```
<220>
<221> misc_feature
<222> (612)..(612)
<223> n = a, c, q, or t.
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<400> 47

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atggctaacg	tatctacagg	acgagaacct	ggtgatatac	cagagactt	agatcaacta	180
agggttggta	tttgcgaatt	acaagaaaaga	agagaaaaat	ttggatctag	caaagaattg	240
gacatggcaa	ttactacatt	aaaagtcttc	gcggtagtag	gactttaaa	tatgacagtg	300
tctactgctg	ctgcagctga	aaacatgtat	actcagatgg	gattagacac	caggccatct	360
acaagagaag	caggagaaaa	agagggaaagc	cctccacagg	catatcctat	tcaaacagta	420
aatggagcac	cacaatatgt	agcacttgc	ccaaaaatgg	tgtcatttt	tatggaaaag	480
gcaagagaag	gactaggagg	tgaggaagtt	caattatgtt	ttactgcctt	ctctgcaat	540
ttaacaccta	ctgacatggc	cacattaata	atggccgcac	cagggtgcgc	tgcagataaa	600
gaaatattgg	angaaagctt	aaagcaattt	acagcagaat	atgatcgtac	acatccccct	660
gatggtccca	gaccattacc	ctattttact	gcagcagaaa	ttatggcat	aggattaact	720
caagaacaaac	aagcagaagc	aagatttgc	ccagctagga	tgcagtgtag	agcatggat	780
cttgaggcat	tagggaaact	ggccgccata	aaggctaatt	ctcctcgagc	tgtcagttt	840
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caagaacaaa	atacagctga	agttaaagtta	tattttaaac	agtcat	cattgctaat	960
gctaatgcag	aatgtaaaaa	ggcaatgagc	caccttaagc	cagaaagtac	ccttagaaagaa	1020
aagttgagag	cttgtcaaga	agtaggctca	ccaggatata	aaatgcaact	cttggcagag	1080
gctcttacaa	aagttcaagt	agtacaatca	aaaggatcag	gaccagtgt	ttttatgt	1140
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aagcctggtc	atttagctgc	caaatgttgg	caaggtggta	aaaagaattc	ggggaaacggg	1260
aaggcggggc	gagctgcagc	cccagtgaat	caagtgcagc	aagcagtaat	accatctgc	1320
ccttcaatag	aggagaaaact	attggattta	taa			1353

<210> 48

<211> 795

<212> DNA

<213> Feline immunodeficiency virus

<400> 48

gttactttaa	aagttttgc	agtggcagga	attctaaata	tgactgtatc	tactgccaca	60
gcagctgaaa	atatgtatgc	tcagatggga	ttagacacca	gaccatctat	aaaagaaaagt	120
gggggaaaag	aagaaggacc	tccacaggct	tatccttattc	aaacagtaaa	tggagcacca	180
cagtagatgt	cccttgatcc	aaaaatggtg	tccatTTTT	tggagagagc	aagagagggg	240
ctaggaggtg	aggaggtcca	actgtggttc	acagccttt	cagctaattt	aacatcaact	300
gatatggcta	cattaattat	gtccgcacct	gcgtgtcag	cagttaaaga	aattctagat	360
gaaacactga	aacagatgac	agctgagtt	gatcgtaccc	atcctcctga	tgggcctaga	420
ccgctgcct	atttcactgc	cgcagagatt	atggggatag	gattaactca	agaacaacaa	480
gcagagccca	ggtttgcacc	agccagaatg	cagtgttagag	catggtacct	tgaagcatta	540
ggaaagttgg	cggccataaa	agccaaatct	ccccgagcag	tacaattgaa	gcagggagct	600
aaagaggact	attcctcatt	catagataga	ctatTTGCTC	aaatagatca	agagcagaac	660
acagctgaag	taaagctgt	tttaaaaacaa	tctttaagta	tagccaatgc	taatccagat	720
tgtaaaagag	caatgagtca	tcttaaacca	gaaagtactt	tagaggaaaa	actgaggggcc	780
tgccaagaag	tagga					795

<210> 49

<211> 795

<212> DNA

<213> Feline immunodeficiency virus

<400> 49

accacttaa aagttttgc	agtggcagga	attctaaata	tgactgtatc	tactgccaca	60
gcagctgaaa	atatgtatgc	tca	gacatggg	ttagacacca	120
ggggaaaag	aagaaggacc	tcc	acaggt	gaccatctat	180
cagtatgtag	cccttgc	aaaaatggg	tcc	tttt	240
ctaggagg	aggagtcc	actgtgg	ttc	acagc	300
gatatggct	cattaattat	gtccgcac	ctt	cagcta	360
gaagcactg	aacagatgac	agctgag	ttt	aatc	420
ccgctgc	cccttgc	at	actgc	atc	480
gcagagcc	cgc	tttgc	cgat	actca	540
ggaaagtgg	cgccat	cc	atgggat	gattaact	600
aaagaggact	atcc	tttgc	atgggat	actgc	660
aca	actg	aaagctgt	ttt	tttgc	720
tgtaaaagag	caatg	gagaca	tctt	aaacca	780
tgccaagaag	tag	gaaagtactt	ttt	tttgc	795

<210> 50

<211> 795

<212> DNA

<213> Feline immunodeficiency virus

<400> 50

accacttaa aagttttgc	agtggcagga	attctaaata	tgactgtatc	tactgccaca	60
gcagctgaaa	atatgtatgc	tca	gacatggg	ttagacacca	120
ggggaaaag	aagaaggacc	tcc	acaggt	gaccatctat	180
cagtatgtag	cccttgc	aaaaatggg	tcc	tttt	240
ctaggagg	aggagtcc	actgtgg	ttc	acagc	300
gatatggct	cattaattat	gtccgcac	ctt	cagcta	360
gaacgc	aacagatgac	agctgag	ttt	aatact	420
ccgctgc	cccttgc	at	actgc	atc	480
gcagagcc	cgc	tttgc	cgat	actca	540
ggaaagtgg	cgccat	cc	atgggat	gattaact	600
aaggaggact	atcc	tttgc	atgggat	actgc	660
aca	actg	aaagctgt	ttt	tttgc	720
tgtaaaagag	caatg	gagaca	tctt	aaacca	780
tgccaagaag	tag	gaaagtactt	ttt	tttgc	795

<210> 51

<211> 1350

<212> DNA

<213> Feline immunodeficiency virus

<400> 51

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gttaggatg	ggagtaagag	taaaagatct	ggagaaggaa	actttagat	120
atggctat	taactacagg	acgagaacca	ggtgatatac	cagactt	180
agatcaatt	tttgtgatt	acaaggcaga	agagaacact	atggatct	240
gatatggca	ttaccactt	aaaagttt	gcagtggcag	taattctaa	300
tctactgca	cagcagctg	aaatatgt	gctcagatgg	tttgc	360
gtaaaagaaa	gtggggaaa	agaagaagga	cctccacagg	tttgc	420
aatggagcac	cacagtatgt	agcccttgc	ccaaaaatgg	tgtccattt	480
gcaagagagg	ggcttaggagg	tgaggagg	caactgtg	ttc	540

ttaacatcaa	ctgatatatggc	tacattaatt	atgtccgcac	ctggctgtgc	agcagataaa	600
gaaatcctag	atgaaacact	gaaacagatg	acagctgagt	atgatcgta	ccatcctcct	660
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caagaacaa	aagcagagcc	cagggttgc	ccagccagaa	tgcagtgtac	agcatggta	780
cttgaagcat	taggaaagtt	ggcggccata	aaagccaaat	ctcccccggc	agtacaattg	840
aagcaggag	ctaaagagga	ctattcctca	tttataagata	gactattgc	tcaaatagat	900
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gctaattccag	attgtaaaag	agcaatgagt	catcttaaac	cagaaaagtac	tttagaggaa	1020
aaactgaggg	cctgccaaga	agtaggatca	ccagggatata	aatgcatt	gctggcgaa	1080
gctctcaca	gggttcaa	acatccaa	aaaggacca	ggctagtg	tttcaattgt	1140
aaaaaaccag	gccacctggc	tagacaatgt	aaagaagcga	agagatgtaa	taactgtgg	1200
aaacctggtc	acttagctgc	taattgctgg	caaggaggta	ggaaaacctc	ggggaaacgag	1260
aagggtgggc	gagctgcagc	cccagtaaac	caagtgcagc	aaatagtacc	atctgcac	1320
ccaatggagg	agaaactatt	agatttataa				1350

<210> 52

<211> 795

<212> DNA

<213> Feline immunodeficiency virus

<400> 52

accaccttaa	aagttttgc	agtggcagga	attctaaata	tgactgtatc	tactgccaca	60
gcagctgaa	atatgtatgc	ttagatggaa	ttagacacca	gaccatctat	aaaagaaaagt	120
gggggaaaag	aagaaggacc	accacaggct	tatcctattc	aaacagtaaa	tggagcacca	180
cagtatgt	cccttgcattc	aaaaatggtg	tccatTTTA	tggagaaggc	aagagagggg	240
ctaggagggt	aggagggtcca	actgtgggtc	acagccttct	cagcaaattt	aacatcaact	300
gatatggcca	cattaatcat	gtccgcac	ggctgtgcag	cagataaaga	aataactagat	360
gaaacactga	aacagatgac	agctgagtt	gatgtaccc	atcctcctga	tggcctaga	420
ccgctgcct	atttcactgc	cgcagagatt	atggggatag	gattaactca	agaacaacaa	480
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acagctgaag	taaagctgt	ttaaaacaa	tcttaagta	tagccatgc	taatccagat	720
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<213> Feline immunodeficiency virus

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naccananna ngtagcnctn ganccnaaaa tgggtcnan tttnatggn aangcaagag      180
anggnntagg aggngangan gtncagggna ngangtncan ntntggtna cngcntntc      240
ngcnaatnta acnnncactg anatggcnac attaatnatg ncngcncng gntngcngc      300
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accacaat at gtagcactt accaaaaat ggtgtccatt tttatggaaa aggcaagaga      180
aggacttagg ggtgaggaag ttcaaggtag gaagttcaac tatggttac tgccttctct      240
gcaaatttaa cacctactga catggccaca ttaataatgg ccgcaccagg gtgcgctgca      300
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accacaat at gtagcactt accaaaaat ggtgtccatt tttatggaaa aggcaagaga      180
aggacttagg ggtgaggaag ttcaaggtag gaagttcaat tatggttac tgccttctct      240
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 aggatttagga ggtgaggaag ttcaggtgag gaagttcagc tatggttac tgccttctct 240
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 agggtagga ggtgaagaag ttcaggtgaa gaagttcaac tatggttcac agccttctct 240
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 ggggctagga ggtgaggagg tccaggtgag gaggtccaac tgtggttcac agcctttca 240
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<210> 62
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<213> Feline immunodeficiency virus

<400> 62

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<210> 63

<211> 19

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<213> Artificial Sequence

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<210> 64

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<210> 65

<211> 21

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<210> 66

<211> 321

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 ggggcttagga ggtgaggagg tccaggtgag gaggtccaaac tgtggttcac agcctttct 240

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<211> 76
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<213> Feline immunodeficiency virus

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<210> 68
<211> 80
<212> DNA
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